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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,046

07/15/2003

Osamu Hashiguchi

HASHIGUCHI Et A1-1

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08/11/2004

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EXAMINER

HARVEY, JAMES R

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/620,046	Applicant(s) <b>OK</b> HASHIGUCHI ET AL.	
	Examiner James R. Harvey	Art Unit 2833	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 7-15-03 (original paper).
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, 11 and 17 is/are rejected.
- 7) ☒ Claim(s) 8, 9 and 12-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7-15-03</u> . | 6) <input type="checkbox"/> Other: _____  |

KSD

***DETAILED ACTION***

***Information Disclosure Statement***

- The Information Disclosure statement(s) and related documents that were filed on 7-15-03 have been considered.

***Priority***

- Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

\*\* Claim(s) 1-4, 6, 7, 11, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Bright et al. (4343524).

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-- In reference to Claim(s) 1, Bright shows (figure 3 ) a contact that has

a stationary portion 66 fixed to the insulator 16;

a first portion 62 having a first contact point (near the lead line of numeral 80) and being electrically continuous with the stationary portion 66;

a substantially U-shaped portion 68 continuous with the first portion 62 ;

a second portion 64 having a second contact point (near the lead line of numeral 81) and being continuous with the substantially U-shaped portion 68; and

a movable portion 74 continuous with the second portion 64 and engaging with the actuator 10, the first and the second contact points confronting each other with a gap (figure 6 ) left therebetween, the actuator 10 sliding to displace the movable portion 74 so that the first and the second contact points sandwich therebetween a connection counterpart (figure 7 ) that is inserted in the gap.

Further, the meaning of “continuous” is deemed to be so broad that it is met by any reference showing the terminal is made from on continuous piece of metal.

-- In reference to Claim(s) 2, Bright shows (cover sheet) the first 62 and the second 64 portions are preformed to have intermediate portions (70, 78), respectively, which are approached to each other to make the gap become small.

-- In reference to Claim(s) 3, Bright shows (cover sheet) guides (the chamfer/radius portion at the end) extending from the first (near the lead line of numeral 80 ) and the second (near the lead line of numeral 81 ) contact points, respectively, for introducing the connection counterpart into the gap (figures 6 and 7 ).

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-- In reference to Claim(s) 4, Bright shows (cover sheet) and (figure 7) a lock mechanism 12 coupled to the actuator 10 for locking a state where the connection counterpart is sandwiched between the first and the second contact points.

-- In reference to Claim(s) 6, Bright shows a cam portion 58 (figure 6 ) rotatably held by the insulator 16 and coupled to the actuator 10 for moving the actuator 10 relative to the insulator.

-- In reference to Claim(s) 7, Bright shows (cover sheet) and (figure 7 ) a lock mechanism 12 coupled to the cam portion 58 for locking a fitted state where the connection counterpart is sandwiched between the first and the second contact points.

-- In reference to Claim(s) 11, Bright shows (cover sheet) and (figures 6 and 7 )

an insulator 16 holding a plurality of first contacts 14;

an actuator 10 slidably holding by the insulator 16; and

a cam mechanism 54 having a cam portion 58, wherein,

when the cam portion 58 is operated to slide the actuator 10, the actuator 10 displaces movable portions 74 of the first contacts 14 so that the first contacts and a plurality of second contacts 116 of a connection counterpart are brought into a fitted state where the first contacts 14 are connected to the second contacts 116, respectively, and wherein

the ZIF connector further comprises a cam lock mechanism 5(6 and stop shelf 40) for retaining the fitted state.

-- In reference to Claim(s) 17, Bright shows (cover sheet) each of the first contacts 14 has

a stationary portion 66 fixed to the insulator 16;

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a first portion having a first contact point (near the lead line of numeral 80) and being electrically continuous with the stationary portion 66;

a substantially U-shaped portion 68 continuous with the first portion 62 ;

a second portion 64 having a second contact point (near the lead line of numeral 81 ) and being electrically continuous with the substantially U-shaped portion, and

the second contact point (near the lead line of numeral 81 ) confronting the first contact point (near the lead line of numeral 80 )with a gap defined therebetween (figure 6); and

a movable portion 74 continuous with the second portion 64 and engaging with the actuator 10, the first and the second portions being preformed to have intermediate portions(70,78),

respectively, which are approached to each other to make the gap become small (figure 7), wherein,

when the cam portion is operated to slide the actuator 10, the actuator 10 displaces the movable portions of the first contacts so that the first contact points and the second contact points sandwich therebetween the second contacts that are inserted in the gaps, respectively.

\*\* Claim(s) 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Hotea et al. (6568955).

-- In reference to Claim(s) 1, Hotea shows (cover sheet) a contact 106 that has

a stationary portion 202 fixed to the insulator 101 (figure 19);

a first portion 208 having a first contact point 205 B (figure 3 ) and being continuous with the stationary portion 202;

a substantially U-shaped portion 218A electrically continuous with the first portion 208;

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a second portion 206 having a second contact point 205A and being continuous with the substantially U-shaped portion; and

a movable portion 212 continuous with the second portion 206 and engaging with the actuator 108 (figures 4 and 16B), the first 205b and the second 205a contact points confronting each other with a gap (figure 6 ) left therebetween, the actuator 108 sliding to displace the movable portion 212 so that the first and the second contact points sandwich therebetween a connection counterpart that is inserted in the gap.

***Claim Rejections - 35 USC § 103***

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

\*\* Claim(s) 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bright in view of Scheibner (5021000).

-- In reference to Claim(s) 10, Bright shows substantially the invention as claimed. However, Bright does not show the cam lock mechanism is arranged so as not to project from the surface of the insulator.

Scheibner shows (figure 1 ) the cam lock mechanism is arranged so as not to project from the surface of the insulator.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the non projecting arrangement of Scheibner with the invention of Bright because the non projecting arrangement keeps the cam lock mechanism from becoming damaged or snagged during the assembly process.

\*\* Claim(s) 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bright in view of Eigenbrode et al. (3963317).

-- In reference to Claim(s) 5, Bright shows substantially the invention as claimed. However, Bright does not show a driving screw screwed in the insulator and coupled to the actuator 10 for moving the actuator 10 relative to the insulator. Instead, Bright shows a lever type cam for moving the actuator.

Eigenbrode shows a screw type cam. Eigenbrode shows (cover sheet) a driving screw 64 screwed in the insulator 10 and coupled to the actuator 50 for moving the actuator 50 relative to the insulator.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the screw and actuator teachings of Eigenbrode to improve the lever and actuator of Bright because, as taught by Eigenbrode (column 2, lines 30-35 ), the screw permits increased contact pressure between the terminals and permits the use of less expensive contact coatings on the terminals without impairing the quality of the electrical connection.

***Allowable Subject Matter***

- Claim(s) 8, 9, and 12-16 has(have) allowable subject matter.



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- Claim(s) 8, 9, and 12-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
- The following is a statement of reasons for the indication of allowable subject matter: The prior art does not show the lock groove at the peripheral portion of the cam lock operating portion with the retaining spring engaged in combination with all the other elements of the claim and the examiner knows of no permissible motivation to combine the prior art such that the subject matter as a whole would have been obvious at the time the invention was made.

If the application becomes allowable, any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowable Subject Matter".

### *Conclusion*

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Effective May 1, 2003, the United States Patent and Trademark Office has a new Commissioner for Patents address. Correspondence in patent related matters must now be addressed to:

**Commissioner for Patents**

**P. O. Box 1450**

**Alexandria, VA 22313-1450**

For additional information regarding the new address, see Correspondence with the United States Patent and Trademark Office, 68 Fed. Reg. 14332 (March 25, 2003).

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- The prior art listed on PTO form 892 that is made of record and not relied upon is considered pertinent to applicant's disclosure because it shows the state of the art with respect to applicant's

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claimed invention. Uratsuji and Dambach show cams that influence the terminal to create a better connection.

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Harvey whose telephone number is 703-305-0958. The examiner can normally be reached on 8:00 A.M. To 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800 extension 33.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2800.

- Effective **October 1, 2003**, all patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, **(703) 872-9306**, with a few exceptions. *See Fax Automation in Technology Center 1700, 1237 Off. Gaz. Pat. Office 140* (August 29, 2000). Replies to Office actions including after-final amendments that are transmitted by facsimile must be directed to the central facsimile number. Unofficial correspondence such as draft proposed amendments for interviews may continue to be transmitted by facsimile to the Technology Centers. *See Fax Automation in Technology Center 1700, 1237 Off. Gaz. Pat. Office 140* (August 29, 2000).

James R. Harvey, Examiner

jrh  
August 5, 2004

  
**THO D. TA**  
**PRIMARY EXAMINER**